SAN JOAQUIN RIVER EXCHANGE CONTRACTORS WATER AUTHORITY
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Consisting of 240,000 acres on the Westside of the San Joaquin Valley

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Via E-Mail sjrdotmdl@rb5s.swrcb.ca.gov
Mr. Mark Gowdy
Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

RE: ***Public Review Draft Staff Report for the Control Program for Factors Contributing to the Dissolved Oxygen Impairment in the Stockton Deep Water Ship Channel (April 2004)***

Dear Mr. Gowdy:

The San Joaquin River Exchange Contractors are committed to helping to develop practical solutions to the State's water quality problems. We are actively involved in the conditional waiver program for irrigated lands and have committed hundreds of thousands of dollars to water quality improvement programs. The challenges we are embracing in the selenium and salinity control programs are enormous. We can not afford to redirect our limited resources to a water quality problem that was created by the excavation of the Stockton Deep Water Ship Channel (DWSC). The low dissolved oxygen (DO) levels in the DWSC are a direct result of the decision to build the DWSC in the middle of the main stem of the San Joaquin River. While that decision was certainly economically advantageous and saved an enormous amount of money, the low DO problem is a direct result of that cost cutting decision. The lands in the upper watershed that were being irrigated for decades before the DWSC was excavated should not be held responsible for a problem created by the dredging of the San Joaquin River to over three times its original depth.

Upper Watershed Loads May Not Contribute to the DO Problem in the DWSC

The Regional board staff has theorized that the DO problem in the DWSC is caused by three main factors: (1) Loads of oxygen demanding substances (2) DWSC geometry (3) Reduced flow through the DWSC. Staff has also speculated where these oxygen demanding loads originate. We remind you that even experts do not understand the dynamics of upper watershed loading on the DO problem in the DWSC. Regional Board staff relies on correlation analysis to theorize that upper watershed loads contribute to the DO problem in the DWSC. It is well accepted that the practice of using correlation to prove causality leads to erroneous conclusions. Independent factors such as temperature or seasonality may lead to increased algae loads in the upper watershed and increases in other

oxygen demanding loads entering the DWSC. The Regional Board must use more advanced reasoning when formally determining which factors contribute to a water quality problem. Failure to do so would be arbitrary, capricious, and an abuse of discretion.

The 2002 CalFED peer review panel found that more study is needed to understand the role of loading of various types and sources of oxygen-demanding materials in the DO problem in the DWSC. As part of the San Joaquin Valley Drainage Authority, the Exchange Contractors are conducting studies suggested by the CalFED DO peer review panels in their July 1, 2002 report. These studies will help answer the questions raised by the peer review panels regarding the role that upper watershed discharges may play in the DWSC's DO problem. To date, the relationship between discharges in the upper watershed, approximately one hundred river miles away from the DWSC, and the DO sags in the DWSC, is not understood. Attainable solutions must be scientifically based and grounded in reliable data. Studies are essential in order to determine possible solutions to the DO problem in the DWSC and are underway. A Basin Plan Amendment apportioning responsibility to the upper watershed without a better understanding of the full dynamics of the problem will not be scientifically sound or legally defensible. It would be irrational and arbitrary for the Regional Board to allocate responsibility to parties that may have no ability to improve the DO problem in the DWSC.

Elimination of Algae/Nutrients from the Lower San Joaquin River May Harm the Ecosystem

Initiating a control program to limit or eliminate algae in the San Joaquin River without fully evaluating the role of algae in the system would be irresponsible. The Regional Board is charged with protecting beneficial uses; therefore the Board must evaluate the affect of its actions on beneficial uses. Algae are an essential part of the food chain in the San Joaquin River. It is one of the basic elements of the food chain. Disrupting the food chain by attempting to eliminate algae from the river could have severe environmental consequences. Additionally, certain areas in the Delta are nutrient starved. Removal of nutrients from the lower San Joaquin River will likely exacerbate those problems. These impacts must be analyzed prior to adopting any basin plan amendment that advocates removal of algae or nutrients from the San Joaquin River.

Algae is not an Oxygen Demanding Substance until it is Killed by the DWSC

The low DO problem in the river does not exist upstream of the DWSC. Algae in the 10 foot natural depth of the river produce oxygen by photosynthesis. DO problems do not occur until the depth of the channel is increased to the extent that algae can no longer access sunlight to survive. Once the algae are killed by lack of light in the deep water of the ship channel, the algae are transformed from oxygen producing organisms into an oxygen demanding substance. The excessive depth of the artificially deepened channel causes the algae to die and decay resulting in low DO levels in the DWSC. Allocating responsibility for the low DO conditions in the DWSC to the sources of algae ignores the reality that the algae is not the cause of the problem; the

killing of the algae is the cause of the low DO levels in the DWSC. Those that are responsible for excavating the natural channel of the San Joaquin River to three times its original depth are the ultimate cause of the low DO levels in the DWSC.

The Observation that Eliminating a Contributing Factor will Eliminate the Existence of a Problem does not Determine Ultimate Responsibility for Solving the Problem

After theorizing that the elimination of any one of the three main factors (load, DWSC geometry, or flow) would eliminate of the low DO problem in the DWSC the Regional Board staff makes the illogical leap that each of these factors should be equally responsible for solving the problem. This analysis is overly simplistic, fundamentally flawed and not supported by any sound science. The observation that a factor may contribute to a problem does not establish a legal duty or moral responsibility for solving that problem.

An example of this principle can be seen by analyzing which party is responsible for a simple traffic accident. A vehicle is traveling northbound , a second vehicle is traveling eastbound . They meet at an intersection and collide causing significant damage to both vehicles. Using Regional Board staff logic, if either of the vehicles had not been driving that day the accident would not have occurred; and, therefore, both parties are 50% responsible for the collision. This allocation of responsibility is absurd. In order to determine responsibility one must look more deeply into the actions of the two parties. If the second vehicle ran a stop sign at the intersection, then one could determine that it was at fault. The analysis of legal responsibility must go deeper than the staff analysis in the DO TMDL.

Summary

The parties that contribute to algae loads in the San Joaquin River are not responsible for solving the DO problem in the DWSC for the following reasons:

- The lower San Joaquin River has contained naturally occurring algae for hundreds of years.
- Significant agricultural production has been in existence in the San Joaquin River watershed since the 1800's and the discharges from these farming activities have consistently contained nutrients sufficient to sustain algae growth in the River and adjoining sloughs.
- Algae are a natural and necessary part of the food chain in the lower San Joaquin River. The ecosystem would be harmed by eliminating algae in the river.
- There is not a low DO problem in the San Joaquin River upstream of the DWSC
- The unnatural depth of the DWSC kills the algae in the River and turns oxygen producing live algae into oxygen demanding decaying algae.
- The San Joaquin River channel was approximately 10 feet deep in the delta prior to the establishment of the DWSC. The first excavation of the DWSC to a depth of 26 feet was

completed in 1933. In the late 1960's the Corp of Engineers began a project to deepen the DWSC but it was halted due to environmental concerns. In 1982 the Corp of Engineers resumed deepening the DWSC to 37 feet after promising to mitigate for inevitable DO problems caused by the depth of the channel. In 1987 the Corp of Engineers finished the excavation of the DWSC to 37 feet.

The above facts clearly show that the DWSC is the proximate cause of the low DO levels in the DWSC. Assessing any degree of responsibility on those who may contribute to algae growth is nonsensical and not supported by logic or science. The Regional Board has an obligation to assess responsibility on the party that has caused the problem and not to simply spread the pain to achieve political expediency.

The Exchange Contractors are committed to resolving water quality problems in the region. We continually demonstrate this commitment by our actions. Regardless of our concerns over some of the provisions in the agricultural conditional waiver program, we have invested substantial resources toward complying with the waiver program's regulatory requirements. As part of the Westside San Joaquin River Watershed Coalition, the Exchange Contractors have taken a leadership role in establishing how agriculture should address water quality issues. We plan to continue this proactive approach but proposals such as this inequitable dissolved oxygen TMDL and basin plan amendment will force us to redirect resources away from water quality improvement programs and toward needless appeals and litigation. We ask the Regional Board to reconsider the simplistic allocation of responsibility proposed in the draft DO TMDL and Basin Plan Amendment, and, instead place the responsibility for solving the problems created by the construction of the Stockton Deep Water Ship Channel on those who made the decision to build the channel in the main stem of the San Joaquin River. The rest of the water users in the basin must be allowed to focus their limited resources on other water quality problems in the basin.

Very truly yours,

Steve Chedester
Executive Director

cc: San Joaquin River Exchange Contractors Water Authority Members
Mr. Art Baggett, State Water Resources Control Board
Regional Water Quality Control Board Members
Mr. Allen Short, San Joaquin River Group Authority
San Joaquin River Resource Management Coalition
San Joaquin River Task Force